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CE/CME Parenting, Parental Mental Health, and Child Functioning in Families Residing in Supportive Housing

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Long-term homelessness is associated with other psychosocial risk factors (e.g., adult mental illness, substance abuse, and exposure to violence). All of these factors are associated with impairments in parenting effectiveness and child adjustment, but there are very limited data investigating parenting among families who are homeless and highly mobile. In particular, there is no literature examining the relationships among observed parenting, parental mental health, and child adjustment in a supportive housing sample. Data are reported from a multimethod study of 200 children in 127 families residing in supportive housing agencies in a large metro area. Observed parenting and parents' mental health symptoms directly affected children's adjustment. The influence of parenting self-efficacy on children's adjustment was mediated through its impact on observed parenting. However, observed parenting did not mediate the relationship between parental mental health and child adjustment. Implications for research and practice with homeless populations are offered.

Keywords: children, parenting, homelessness, family supportive housing, mental health

Family homelessness has grown significantly over the past two decades, and families with children now constitute approximately 40% of the homeless population (e.g., Burt, Aron, Lee, & Valentine, 2001). Over the course of a year, an average of 1.35 million children experience homelessness in the United States (Burt et al., 1999; National Alliance to End Homelessness, 2007; U.S. Conference of Mayors, 2004). The typical homeless family is a mother with young children (Rog, McCombs-Thornton, Gilbert-Mongelli, Brito, & Holupka, 1995; Rosenheck, Bassuk, & Salomon, 1999).

Children who are homeless are more likely than poor housed children to experience hunger, multiple school placements, exposure to violence, and maltreatment (Anooshian, 2005; Gewirtz & Edleson, 2007), parental substance abuse, and/or parental mental illness (Bassuk et al., 1996). A subset of homeless children also have experienced out-of-home placement by child protection authorities or through voluntary placement by parents with housed relatives (Shinn, Rog, & Culhane, 2006). The rates of exposure to traumatic events place homeless children at high risk for posttraumatic stress and related disorders (Vostanis, 2002).

Moreover, most homeless mothers report having experienced trauma in their lives; for example, severe physical or sexual abuse (Weinreb, Goldberg, & Perloff, 1998). Almost three quarters of mothers who are homeless meet criteria for at least one lifetime mental disorder (including posttraumatic stress disorder), substance use disorder, or both (Zima, Wells, Benjamin, & Duan, 1996), with lifetime substance use disorder rates almost twice as high as in the general female population (Bassuk, Buckner, Perloff, & Bassuk, 1998).

Mental Health in Homeless and Formerly Homeless Families

A significant body of research has demonstrated the negative impact of homelessness on children's functioning (e.g., Rafferty & Shinn, 1991; Weinreb et al., 1998). The instability and multiple risk factors associated with homelessness (e.g., hunger, domestic violence, parental mental illness) place children at high risk for emotional and behavioral problems and foster care placement. Moreover, foster care placement is in itself a powerful risk factor for adult homelessness contributing to a potential intergenerational cycle of homelessness (Bassuk et al., 1997a; Koegel, Melamid, & Burnam, 1995; Stein, Leslie, & Nyamathi, 2002; Susser, Lin, Conover, & Struening, 1991).

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The impact of homelessness appears to extend beyond the period of homelessness itself. Comparing children in homeless families residing in a shelter with a sociodemographically matched group of very poor, housed children, Masten, Miliotis, Graham-Bermann, Ramirez, and Neemann (1993) found that homeless children faced more recent adverse life events, were more likely to have adjustment problems in the clinical range, and had more impaired school functioning. In addition, within the poor housed group, there was a subgroup of formerly homeless children. These children displayed significantly more internalizing and externalizing problems than the rest of the housed group, similar to the homeless children. Vostanis, Grattan, and Cumella (1998) followed a group of 58 homeless families for a year after shelter stay, comparing them to a sociodemographically matched group of children who had never been homeless All families were housed at follow-up, but the formerly homeless children had more complex, and greater numbers of mental health problems than the never-homeless children.

Studies of families in supportive housing may help to further understand psychosocial status in homeless and formerly homeless families. Family supportive housing, formalized through the 1987 McKinney Homelessness Act, combines support services (primarily case management) with subsidized housing for homeless families. The range of services provided, and whether they are mandated or voluntary varies across agencies. There are few studies examining the effectiveness of supportive housing in stabilizing and improving outcomes for homeless families, but a recent review suggests that services may be important for promoting stability among homeless families (Bassuk & Geller, 2006). Since 2003, allocation of supportive housing resources by the U.S. Department of Housing and Urban Development has been limited to households with caregivers with disabilities (primarily mental illness, chemical dependence, and HIV/AIDS) who also meet criteria for chronic homelessness, defined as 12 consecutive months of homelessness, or four episodes in the last 3 years. These criteria suggest that families in supportive housing may have significant histories of risk and adversity, providing a rationale for the urgency to learn more about the adjustment of children in these settings (Gewirtz, 2007). Indeed, descriptive studies of this population indicate high rates of exposure to various risk factors and challenges in child functioning (Gewirtz, Hart-Shegos, & Medhanie, 2008).

Correlates of Child Adjustment in Homeless Families

Most empirical studies examining contributions to child adjustment in homeless families have focused on parent(s) mental health status as a predictor. Maternal psychological distress or mental illness has been found to be a strong predictor of child internalizing and externalizing problems in homeless families (Bassuk, Weinreb, Dawson, Perloff, & Buckner, 1997b; Vostanis, Grattan, Cumella, & Winchester, 1997; Zima et al., 1999).

A related influence on child adjustment is parenting. Developmental research has shown *parenting practices* to be strong predictors of children's adjustment, but there has been very little investigation of parenting among homeless families. From a developmental psychopathology perspective, effective parenting is a critical protective process that is predictive of resilience among high-risk children (e.g., Masten et al., 1999; Werner & Smith, 1992). However, little empirical work has examined the elements of parenting in the context of homelessness.

Investigating parenting in homeless families is particularly important because the nature of homelessness (e.g., lacking a private space in which to parent) may directly affect a parent's capacity to be an effective parent. Bassuk and colleagues (1997b) found self-reported parenting practices to be one of several correlates of adjustment among homeless preschoolers. Comparing homeless and low-income housed African American mothers of young children, Koblinsky, Morgan, and Anderson (1997) reported that homeless mothers were rated as providing a less structured environment, stimulation for learning, and warmth and acceptance, compared to housed mothers. We could find no other study of homeless or formerly homeless families that utilized observational measures of parenting practices. Observational assessment of parent–child interaction has been demonstrated a valid source of data about parenting practices, and less vulnerable to reporter bias than typical self-report measures (Aspland & Gardner, 2003). In addition, by diversifying both method and informants, observational data can reduce the measurement bias that emerges from relying on parents as sole informants.

Although there is a relative dearth of research on homelessness and parenting, there is a significant body of literature on stressful contexts and their relationship to parenting and child adjustment that may be relevant to the population of homeless families. We briefly review this literature toward providing a conceptual framework for this study.

Models of Stressful Contexts, Parenting, Mental Health, and Child Adjustment

Particularly relevant to the context of homelessness is research on the stressors of economic hardship and family transitions. These studies demonstrated that disrupted family processes mediate the relationship between family stressors and children's adjustment. For example, Elder and colleagues (e.g., Conger et al., 2002; Elder, Caspi, & Downey, 1986) demonstrated how limited economic circumstances function as amplifiers of negative and conflictual events within the family setting, reducing the quality of family interaction and increasing child behavior problems. Conger et al. (2002) further tested this family stress model among African American families, finding that economic hardship predicted economic pressure in families, predicting caregiver emotional distress and disrupted parenting practices, leading to children's problems and poorer adjustment.

Patterson's (1982) social interaction learning (SIL) model proposes that family interactions account for the impact of adverse life circumstances on parenting practices and child outcomes. Using observational data with a large range of families, Patterson identified *coercion* as a primary mechanism for child behavior problems. Coercion refers to escalating, negatively reinforcing interactions between parents and children (e.g., shouting to effect compliance from children). The path to coercion begins with a range of stressful life circumstances, including poverty, health problems, and family transitions. These stressors can magnify dysfunctional behavioral patterns within families. Within the SIL model, the impact of these stressors on child adjustment is primarily determined by the degree to which they disrupt parenting practices. When stressors result in increases in coercive parenting

and decays in positive parenting, children's overt antisocial behavior grows (Calzada, Eyberg, Rich, & Querido, 2004; DeGarmo, Patras, & Eap, 2008; Mistry, Vanderwater, Huston, & McLoyd, 2002). The SIL model has also demonstrated how positive parenting practices (skill encouragement, positive involvement, effective discipline, problem-solving, and monitoring) replace coercive tactics and promote prosocial behavior (see Forgatch & Knutson, 2002; Patterson, 2005; Reid, Patterson, & Snyder, 2002).

Distinguishing Parenting and Caregiver Functioning

In stressful family circumstances, caregivers must develop strategies to draw on the resources within the adult environment as well as maintain or develop effective child rearing practices. In the context of family adversities, the two roles may have separate and unique effects on child outcomes (DeGarmo, Patterson, & Forgatch, 2004; Patterson, DeGarmo, & Forgatch, 2004). In their examination of divorce as a family stressor in the context of the SIL model, Forgatch and DeGarmo (2002) described mothers' separate roles in family interactions: "mother as person" (i.e., a woman's individual psychological and extrafamilial social functioning) and "mother as parent" (i.e., a woman's caregiving role). Although the roles of "mother as person" and "mother as parent" clearly are interrelated, the caregiving role (i.e., "mother as parent") is the more proximal influence on child behavior, and hence the target for intervention when child adjustment is the outcome. Indeed, results from a randomized prevention trial to enhance parenting skills among recently separated mothers demonstrated that reductions in coercive parenting and increases in positive parenting led to improvements in child behavior over a 3 to 9 year period (Beldavs, Forgatch, Patterson, & DeGarmo, 2006; DeGarmo et al., 2004; Forgatch, Patterson, DeGarmo, & Beldavs (2009); Martinez & Forgatch, 2001). Interestingly, reductions in child externalizing behavior mediated intervention-related decreases in maternal depression (DeGarmo et al., 2004).

There are no data among homeless families examining the contributions of parenting practices compared with caregiver functioning in influencing child adjustment (DeGarmo et al., 2004; Patterson et al., 2004). In this study, we set out to examine how, among a particularly highly stressed population of families (i.e., formerly homeless families in supportive housing) parenting, child adjustment, and parents' mental health were associated.

Parenting Self-Efficacy

In this study, we broadened the construct of parenting influences on child adjustment to include not only observed parenting practices (i.e., behavioral parenting) but also a cognitive domain of parenting. Parenting self-efficacy is a parent's confidence in her ability to influence her child's behavior and development (Teti & Gelfand, 1991). In a study of low-income mothers, Raver and Leadbeater (1999) found maternal self-efficacy to be inversely related to an index of environmental risks and child temperament difficulty. Comprising knowledge of specific parenting task skills and a belief in the ability to achieve desired parenting outcomes, parenting self-efficacy is a valuable construct because it is related to parenting competence (Coleman & Karraker, 1998). For example, studying an economically disadvantaged sample of inner-city families, Elder, Eccles, Ardelt, and Lords (1995) reported that economic hardship negatively influenced parenting self-efficacy, which in turn predicted parent management strategies. We hypothesize that parenting self-efficacy will be associated with higher levels of child adjustment and higher levels of observed skillful parenting practices.

Study Hypotheses

The lack of empirical studies limits knowledge of parenting practices in families who have experienced homelessness, as well as further understanding of relationships between parental mental health, parenting (behavioral/practices and cognitive/self-efficacy domains), and child adjustment. We conceptualize family homelessness as a severe family stressor that might function in a similar way to other family stressors to impair child adjustment. Therefore, informed by family stress and SIL models, this study aimed to explore the nature of relationships among parental mental health, perceived parenting self-efficacy, observed parenting, and child adjustment in a diverse sample of formerly homeless families. Applying the theoretical frameworks described above, we hypothesized that any direct effects of either parental mental health or parenting self-efficacy on child adjustment would be mediated by observed parenting practices. The hypothesized conceptual model is shown in Figure 1. Specifically, we predicted that, among a population of families who have experienced homelessness, parental psychosocial risk factors measured as poor mental health problems and low parental efficacy would be associated with lower levels of child adjustment. Furthermore, we expected that parental psychosocial risk would be associated with lower levels of effective parenting, and that effective parenting practices would mediate or account for the association between parental risk and child adjustment.

Method

Data for this study were baseline assessments gathered in the context of a randomized trial of a prevention program implemented in 16 supportive housing agencies in a large metropolitan area. The group of supportive housing agencies—known as the Healthy Families Network (HFN)—has partnered with university researchers on a number of initiatives, described elsewhere (Gewirtz, 2007; Gewirtz, Hart-Shegos, & Medhanie, 2008).

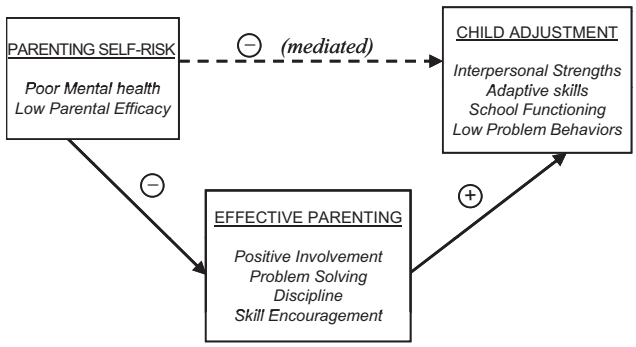

Figure 1. Hypothesized strength based mediational model of parental psychosocial risk factors, effective parenting practices, and child adjustment.

Supportive Housing Agencies and Service Approaches

The HFN comprises 16 private, nonprofit, single site family supportive housing agencies that serve more than 600 families (with over 1,200 children) each year. Together, the agencies house more than 95% of formerly homeless families resident in single site family supportive housing in a seven-county metropolitan area of more than 2.5 million people. HFN agencies are quite diverse in their missions, target populations, and criteria for admission. Of the 16 agencies, 12 provide permanent family supportive housing, and three provide temporary supportive housing (up to 24 months stay). The remaining agency is a temporary shelter with a 6-month maximum length of stay, but is a partner in the HFN as it is the only supportive housing provider in the county it serves.

With one exception (the shelter, which housed three of the families in this study) all sites provide private units for individual families, with multiple units in a building. Most sites house families in "low rise" apartment buildings of 10–20 families; the maximum number of families in a single apartment building is 27. All apartment buildings housing these families are entirely dedicated to supportive housing. Families' apartments are private spaces, and include full kitchens and living areas. Agencies vary in the amount of communal space: some agencies have no communal space, some have a single community room, and others have several classrooms and other communal spaces.

Eligibility criteria for entry into housing vary across agencies, but include family homelessness, as well as parental mental illness, substance use disorder, HIV infection, and/or a mother and children fleeing domestic violence or prostitution. Families applying for entry to the supportive housing programs must be homeless at the time of application, (i.e., living in a temporary shelter, or car, or doubled up with friends or family). Although each site is an independent, nonprofit agency, the sites have collaborated for several years on their service approaches, and have similar missions and service approaches focused on fostering independence in families. Case management services and programming, although an expectation, are not typically mandated, and vary in accordance with the individual needs of families.

Staffing patterns vary across HFN sites, but most commonly, sites offer case management services to support families to maintain their housing, manage finances, access jobs, education and/or training, access health insurance, routine medical services, and other needed community resources. Some agencies have child advocates who provide childcare and after-school programming. To the extent that service approaches vary, they do so primarily as a function of fiscal resources. Thus, the ratio of case managers to families varied across agencies, with some agencies having a single case manager to support all families, and others having several case managers as well as child and youth advocates. The ratio of service staff to client families varies from 1:10 to 1:20.

Participants

Families with 6–12-year-old children living in 16 single-site supportive housing communities in Minneapolis, MN, and St. Paul, MN, areas were invited to participate in a research trial testing the effectiveness of the Early Risers program (August, Realmuto, Hektner, & Bloomquist, 2001) when delivered in family supportive housing. Individual housing sites were randomly assigned to intervention or comparison sites and in each site, all resident caregivers living with at least one 6- to 12-year-old child were invited to participate in the study. The procedures for baseline data collection were identical across conditions, and all data reported here are aggregate data across both conditions. A total of 253 children and their parents ($n = 152$) provided consent/assent to enroll in the program. Eighteen of these families (with 40 children) relocated or dropped out of the study immediately after recruitment and before baseline assessment. Of the remaining 134 families (with 213 children), 127 families with 200 children provided information for baseline assessments, and107 families with 165 children participated in observational tasks. Mean child age was 8.10 years ($SD = 2.3$), and 51% of children were girls. Sixty-six percent of the children had a sibling also in the study, and the number of children per family varied from 1 to 5 with a mean of 1.6 children per family. All of the participating families were single-headed and overwhelmingly female-headed (98.5%). The number of families per study site ranged from 1 to 34 with a mean of 13.4 children per study site. Average annual parent income was \$10,371.59 ($SD = \$5,486.73$). Parents were high school graduates or equivalent on the average ($M = 11.98$ years of education, $SD = 1.61$). Half of the families were African American, 19% were White, 20% self-identified as multiracial, and 11% as other minority groups.

Procedures

Case managers in each of the housing sites participating in the randomized trial described above facilitated introductions to study research assistants to complete the baseline assessments. Families assigned to the intervention or comparison groups both completed identical baseline measures. After completion of consent documents, families were contacted by research assistants who scheduled a 2-hr assessment session in the family's home. A parent was asked to be present together with the index child. Where more than one child in the family was within the target age group, separate assessment sessions were scheduled for parent(s) and each child. The measures reported below are a subset of the study measures gathered.

Measures

Control variables. Child age, parent income, and education were assessed in the context of a structured interview administered to parents (mothers or other female caretakers) during baseline data collection. *Child age* was measured in years since birth and *child gender* was scored as "1" for boys and "2" for girls. *Parent education* was years of schooling completed. *Parent income* was annualized dollar amount from reported weekly, monthly, and annual income.

Parental mental health. Parents completed the Brief Symptom Inventory 18 (BSI; Derogatis, 2000) a brief, self-report inventory that assesses adult psychological distress. The measure has 18 items, six each on somatization, depression, and anxiety. Parents were instructed to indicate how distressed they felt by each symptom during the past 7 days, on a 5-point scale ranging from 0 = *not at all* to 4 = *extremely*. The Global Severity Index (GSI), a measure of overall health symptoms, was derived by summing the totals for all items then dividing this sum by the total number of

questions answered. The BSI has demonstrated good internal consistency (alpha reliability for the nine subscales ranged from 0.71–0.85), test–retest reliability (.90), and convergent and discriminate validity (Derogatis & Spencer, 1982). Gender-specific normative scores are provided in the form of *T* scores with a mean of 50 and a standard deviation of 10.

Parenting self-efficacy. *The Parental Locus of Control scale* (Campis, Lyman, & Prentice-Dunn, 1986) assesses parents' perceptions of their parenting control and efficacy with their child(ren). Forty-seven items on a Likert scale give response options from *strongly agree* to *strongly disagree*. In this study, we used the parenting self-efficacy subscale (other subscales assess child's control of parent's life, parental responsibility, parental control of child's behavior, and parental belief in fate/chance). Evidence for internal consistency, construct validity, and discriminant validity were reported by Campis et al. (1986).

Parenting practices. Parenting practices were assessed using observational ratings of mother-child interaction during *Family Interaction Tasks* (FITs). Drawn from prior observational studies of parent–child relationships in middle childhood, the FITs provide validated measures of parenting practices demonstrating convergent validity, external validity predictive of children's developmental outcomes, and measures that are clinically sensitive to parent training intervention (Forgatch & DeGarmo, 1999; Weinfield et al., 1995). The FITs in the present study lasted approximately 20 minutes. First, the dyad was asked to solve two 5-min problem-solving tasks that required resolving current conflict issues. The issues were selected separately by mothers and children during their individual interviews, from the Issues Checklist (Prinz, Foster, Kent, & O'Leary, 1979), which lists topics of frequent family conflicts (e.g., chores, school problems, behavior). Following this, mother and child engaged in three cooperation/competition and teaching tasks: a guessing game, labyrinth game, and tangoes task. The guessing game requires mother, then the child, to provide clues about the cards they hold in order for the other to guess the objects on the cards. The labyrinth game uses a wooden labyrinth board, adapted so that the only open holes are those at the four corners of the board. The game requires mother and child to use the control knobs to move marbles from the center of the board to one or more of the corner holes, first cooperatively, then competing with one another. The tangoes task requires the mother to provide guidance to the child for the child to put together a series of plastic shapes to match designs shown on six cards. At the end of each assessment, families were debriefed to address any concerns or questions.

FITs were videotaped and coded using previously validated ratings of key parenting practices predictive of children's developmental outcomes (DeGarmo et al., 2004) including skill encouragement, positive involvement, problem solving outcome, and inept coercive discipline. After directly viewing each of the respective interaction tasks, trained coders rated parent and child behavior on a 4- or 5-point scale indicating, for example, whether a specific behavior "Hardly ever applies," "Applies sometimes," "Applies most of the time," or "Applies all of the time." Ratings were provided directly after viewing tasks; for example, problem-solving ratings were provided directly after viewing the problem solving tasks. In addition, overall global impressions were provided after viewing and scoring all of the tasks. To assess coder agreement, 24% of the videotaped sessions were randomly selected for reliability checks. The intraclass correlation coefficient (ICC) was computed for an index of interrater reliability.

Inept coercive discipline was an 11-item scale score rated on a 5-point scale; items included mother was . . . overly strict, authoritarian, erratic, inconsistent, oppressive, used nagging or nattering to get compliance, and so on. Cronbach's alpha was .87. Coder ICC was .69.

Prosocial parenting was the mean of two positive parenting practice scales, parent's skill encouragement and positive involvement. *Skill encouragement* was based on nine items rating the mother's ability to promote children's skill development through contingent encouragement and scaffolding strategies observed during the labyrinth, guessing game, and tangoes tasks. The skill encouragement scale included nine items such as *breaks task into manageable steps*, *reinforces success*, *prompts*, and *corrects appropriately*. Some items were originally on a 4-point scale and some on a 5-point scale. All items were rescaled from 1 to 5 for computing a growth construct score. Cronbach's alpha was .78. Coder ICC was .54. *Positive involvement* was based on 31 items selected from the refreshment, tasks, clean up, problem solving, and game tasks. Items included ratings of mothers' *warmth*, *empathy*, *encouragement*, *affection*, *acceptance*, *respect of child*, and so forth. Items were rated on 4- and 5-point scales and subsequently rescaled from 1 to 5. Cronbach's alpha was .96. Coder ICC was .88.

Problem solving outcome was assessed with a 9-item scale scored for each of the problem solving discussions. Items were rated on a 5-point scale indicating the *solution quality, extent of resolution*, *apparent satisfaction*, *likelihood of follow through*, and so forth. Cronbach's alpha was .92 for Issue A and .93 for Issue B. Coder ICC was .79 and .67, respectively, across Issues A and B.

Child adjustment. The Behavior Assessment System for Children (2nd Ed.) (BASC2; Reynolds & Kamphaus, 2004) is a multidimensional system used to assess broad domains of externalizing problems, internalizing problems, and adaptive skills (αs = .85–.89). Items are rated on a 4-point scale, ranging from 0 = *never* to 3 = *almost always*. Gender-specific normative scores are provided in the form of *T* scores with a mean of 50 and a standard deviation of 10. Parents rated child behaviors using the parent version of the BASC2 (BASC2-PRS; Reynolds & Kamphaus, 2004). The BASC2-PRS uses a 4-point rating format, and scores are summed to yield a total problems index, as well as an index of adaptive skills.

The Behavioral and Emotional Rating Scale: A Strength-Based Approach to Assessment (2nd Ed; BERS2; Epstein, 2004) is a standardized scale designed to assess the behavioral and emotional strength of children on five dimensions: interpersonal strength, family involvement, intrapersonal strength, school functioning, and affective strength. Parents completed the BERS2-Parent Rating Scale (PRS) that consists of 52 items rated on a 4-point scale, ranging from 0 = *not at all like the child* to 3 = *very much like the child*. Gender-specific *T* scores are presented with a mean of 50 and a standard deviation of 10. Adequate reliabilities and validity have been reported (Epstein, 2004).

Analytic Strategy and Multilevel Framework

Basic multivariate normal regression and analysis of variance techniques require that subjects in analyses are independent with

uncorrelated error terms. This independence assumption is violated when multiple children or siblings from the same families are sampled together in the data. Siblings reared in the same family are likely to share the same parenting environment as well as genetic make up, and therefore are likely to be more similar in their functioning than are children reared in different families. With the possibility of children from the same families, or families from the same study sites being more alike because they share similar housing environments, it is possible that the intraclass correlation (i.e., the similarity within clusters) can bias results of analyses when nonindependence is violated. To address these potential biases, and analogous to the predominant application of multilevel modeling in education research to address children sampled from the same classrooms or schools, the present study required an analytic framework to address "clustering" of children within families and families within sites.

Therefore, we employed multilevel modeling approaches to address clustering in the present data. Specifically, the present study assessing child adjustment was characterized by a three-level model: 200 children (Level 1) clustered within 127 families (Level 2-parents), and families clustered within 15 sites (Level 3). The analysis plan included three basic steps; (a) an evaluation of missing data, (b) confirmatory factor analysis (CFA) of key constructs, and (c) multivariate evaluation of the hypothesized model. For missing data, we conducted attrition analysis and evaluated patterns of missing data at the child level and at the family level. Because this is an initial evaluation of prior validated measures within a supportive housing population we specified CFA models for the parenting and child adjustment constructs. To address clustering of children within families for the CFA models, we employed MPlus5 (Muthén & Muthén, 2007) because of its ability to evaluate multilevel structural equation models (SEM). More specifically, MPlus provides a simultaneous test of a within and between family factor analysis of the parenting and child adjustment constructs. Another advantage of MPlus was the ability to incorporate missing data in the CFA models using full-information maximum likelihood (FIML) estimation, which provides more statistically reliable standard errors compared to mean-imputation, list-wise, or pairwise SEM models (Wothke, 2000). Because MPlus is two-level estimation, for the multivariate prediction models, we saved resulting factor scores at the child level and then employed hierarchical linear modeling (HLM6: Raudenbush & Bryk, 2002) because of its ability to model three-level data to address the additional clustering of families within study sites. Both MPlus and HLM provide information to evaluate the variance accounted for by clustering of data or the intraclass correlation coefficients for study variables.

Results

The means, standard deviations, and ICCs for the parenting and child adjustment indicators are presented in Table 1. On average, the children in this sample were at the clinical range cut score for problem behaviors on the BASC-2 and at the clinical level for low resiliency measured by the BERS-2 strength index. Parents were above the mean but on average in the subclinical range on the GSI. Parents were also characterized by average levels of prosocial parenting, coercive parenting, and below average problem solving on the 1 to 5 scores of the parenting indicators.

Table 1
Means, Standard Deviations, and Intra-Class Correlation Coefficients (ICCs) for Study Variables

	M	*S*	Family ICC	Site ICC
Child level ($N = 200$)				
Parent reported child adjustment				
Total problems *T* score BASC-2	59.79	11.58	.41	.09
Adaptive skill *T* score BASC-2	44.02	8.81	.30	.05
Total strength index *T* score BERS-2	49.02	10.01	.37	.02
Observed parenting practices				
Inept discipline	2.48	.77	.44	.05
Prosocial parenting	2.63	.59	.51	.06
Problem solving	1.81	.85	.41	.14
Parent level ($N = 127$)				
Global Severity Index *T* score	54.73	9.94	.82	.02
Parenting self-efficacy (low)	17.52	5.37	.82	.06

Note. Parenting self-efficacy was reflected for analyses to indicate higher efficacy. BASC = Behavior Assessment System for Children; BERS = Behavioral and Emotional Rating Scale.

Inspection of the ICC coefficients indicated moderately strong associations within families, meaning siblings were similarly rated on adjustment (ICC = .30 to .41) and parenting of siblings was related (ICC = .41 to .51). Parent's mental health and efficacy reported at repeated assessments with individual children were highly correlated and were essentially test–retest evaluations (ICC = .82). Characteristics of families within supportive housing agencies exhibited low intraclass correlations. However, it is interesting to note that the highest associations among the child reported indicators was for child adjustment problems (.09) and among the observed parenting practices the ICC was .14 for problem solving. This could be interpreted to mean that some study sites were more facilitative than others in helping parents resolve issues.

Missing Data

We next evaluated missing data. At the family or parent level, we compared parents who completed the baseline assessment protocol with parents who enrolled but dropped out before a baseline assessment was completed. No significant differences were observed between 127 families with baseline data and available demographic information on child age, parent income and education for dropouts ($n = 25$). At the individual child level (Level 1) we compared the parent-rated child adjustment indicators for those parents who completed observational assessment ($n = 165$) with those parents who did not ($n = 35$). No significant differences were obtained. For item nonresponse, we evaluated the patterns of missingness in the data for participating families. For the parent level, data were missing ranging from 1.6 to 11.8%. Little's test of missing data revealed parent predictors were missing completely at random [Little's MCAR Chi-Square (11) = 13.06, $p = .29$]. Similarly, the child level data on parent reported adjustment and observed parenting practices was missing at random [Little's MCAR Chi-Square (35) = 49.18, $p = .06$]. Missing data for the intent to enroll ($n = 253$) sample likewise was missing at random at the parent level and child level. Therefore, full information modeling is advised.

Confirmatory Factor Analysis (CFA)

We next specified latent variable SEMs using the parent reported indicators of child adjustment and the observed parenting scores. The multilevel framework in MPlus conducts a CFA in the same way as a single level analysis. First, a measurement factor model is estimated for all children in the sample, then sibling data repeated within families is specified as a random effects intercept for each variable. This information is then modeled as a latent variable with random variance at the between-families level. Results of the multilevel CFA are shown in Figure 1 using standardized path coefficients. The top half of the figure is the specification of the between-families model estimated from the latent random intercepts from data observed at level 1, with the random intercepts represented by the unnamed circles loading onto the between-level factors. The within-families factor model is represented in the bottom of the figure and is the same as a single level SEM CFA. The specified model obtained good fit to the data ($\chi^2_{(16)} = 18.69$, $p = .28$, CFI = .99, RMSEA = .03) with significant factor variances and loadings at the within and between levels. In addition, the correlation between effective parenting practices and child adjustment was a significant association at the family ($r = .65$, $p < .001$) and individual child level ($r = .39$, $p < .01$). Therefore, the CFA revealed that there were significant individual differences at the child level and significant differences between families across study sites at the latent variable level.

Multivariate Prediction Models

In the final step of the analyses we conducted a set of multivariate regression models using HLM. The goal was to examine hypothesized relations among predictors of child adjustment accounting for clustering and variance across levels. The first model evaluated the variance accounted for in child adjustment across each level using the random intercept model

$$\text{Child Adjustment Factor} = \gamma_{000} + r_0 + u_{00} + e$$

where γ_{000} *is the variance component at the child level*, r_0 is variance at the family level, u_{00} variance at the site level plus a random error term. The resulting unconditional model provided variance components of .701 at the child level, .263 ($p < .000$) at the family level, and .036 at the site level. Significance of variance components are provided for family and site levels indicating significant individual differences across families in child functioning but minimal variance accounted for by site variation.

In the next step, the conditional, or multivariate prediction model, was specified by entering the predictor variables of child adjustment in a hierarchical fashion first by entering the control variables and the theoretical parent indicators of mental health and parenting self-efficacy (Model 1). Model 2 then entered the effect of observed parenting practices as the hypothesized mediating mechanism. Results of the prediction model are provided in Table 2 using standardized estimates achieved by modeling standardized outcome scores and standardized predictors. Results of Model 1 coefficients for child adjustment indicated that poor parental mental health was associated with lower levels of child adjustment ($\beta = -.30$, $p < .001$) and conversely, parenting self-efficacy was associated with higher levels of child adjustment ($\beta = .20$, $p < .05$). The model deviance parameters indicated a significant prediction model over the baseline unconditional model above. Observed parenting practices were associated with higher levels of child adjustment ($\beta = .54$, $p < .001$) supporting the risk and resilience perspective for effective parenting practices in at risk populations. Upon entering effective parenting in Model 2, parental mental health retained a significant direct effect on child adjustment, and the effect of parenting self-efficacy was mediated by effective parenting. In total, Model 1 accounted for 48% of the between family variation in child adjustment, and adding parenting, accounted for an additional 25% of the variation.

Table 2
Standardized HLM Regression Estimates and Standard Errors for Prediction of Child Adjustment and Parenting Practices

	Child adjustment		Parenting practices
	Model 1	Model 2	Model 3
Intercept	−.01 (.08)	−.04 (.08)	.18 (.23)
Child age	−.05 (.06)	−.03 (.06)	−.02 (.02)
Gender (girl)	.06 (.05)	.05 (.06)	.05 (.08)
Parent education	−.02 (.07)	−.03 (.06)	.01 (.08)
Parent income	.07 (.06)	−.01 (.06)	.13† (.07)
Global Severity Index *T*	−.30*** (.08)	−.22*** (.05)	.02 (.07)
Parenting self-efficacy	.20* (.10)	.09 (.07)	.38*** (.08)
Parenting construct	—	.54*** (.06)	—
PVE family level	.48	.73	.38
Model deviance	523.68	461.02	506.34
$\Delta\chi^2$ ratio model test	29.23***	62.66***	

Note. $\Delta\chi^2$ = Change in chi-square likelihood test; PVE = proportion of random variance explained.
$^{\dagger}p < .10$. $^{*}p < .05$. $^{**}p < .001$. $^{***}p < .001$.

To further evaluate the mediation effect, we used methods for multilevel models to assess whether parenting self-efficacy had a significant indirect effect on child adjustment through parenting practices (Preacher & Hayes, 2004; Raudenbush & Sampson, 1999). This requires demonstrating a direct effect of efficacy on parenting practices and obtaining a significant indirect effect. Results are shown in Model 3 with efficacy significantly predicting higher levels of effective parenting ($\beta = .38$, $p < .001$). Further, the Sobel test for the indirect effect of parenting self-efficacy on child adjustment through effective parenting practices was significant, $t = 4.20$, $p < .001$ indicating the effect of parenting self-efficacy was fully mediated through effective observed parenting. The cross-level effects are summarized in Figure 2 using the standardized effect coefficients. The multilevel findings are summarized in Figure 3.

Discussion

This study's findings of higher mean levels of parental distress and childhood maladjustment than in the normative population resonate with findings of earlier research with families who have experienced homelessness (Gewirtz & Medhanie, 2008; Vostanis et al., 1998). Few studies have examined parenting in homeless families, with no published data on parenting in families residing in supportive housing. However, given the well-documented stressors of homelessness, as well as data on economic and family stressors experienced in this sample, it is not surprising that both

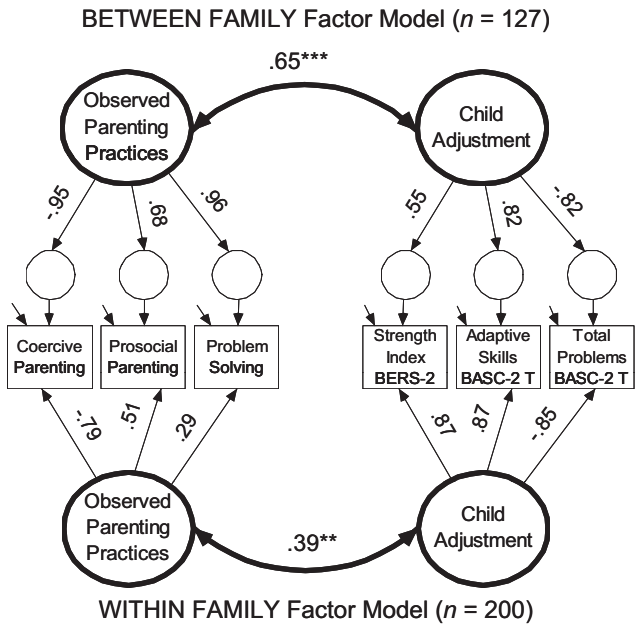

Figure 2. Within and between family multilevel structural equation confirmatory factor analysis. Note: Paths are standardized beta coefficients [$\chi^2_{(16)} = 18.69$, $p = .28$, comparative fit index (CFI) = .99, root mean square error of approximation (RMSEA) = .03; Within standardized root mean square error (SRMR) = .05; Between SRMR = .09]. ** $p < .01$. *** $p < .001$.

parents and children in our sample evidenced higher than average levels of symptoms. In this sample, the lack of a socioeconomically matched, housed comparison group necessitated comparison with population-wide norms. However, findings from a recent study comparing this sample with a poor housed sample of similar diversity indicated higher child and parent symptoms among this sample than in the poor housed group (Lee, August, Realmuto, Klimes-Dougan, & Gewirtz, 2009).

Despite the higher mean levels of parental symptoms and child maladjustment, the finding of a normal distribution around the mean on child adjustment, parental mental health, and parenting measures is of interest, indicating a range of functioning even within a very high-risk population. Thus, consistent with resilience research (e.g., Masten, 2001) our findings indicate the presence of child strengths, absence of symptoms, and strong parenting among some families in supportive housing. This is particularly important against the backdrop of the extreme challenges faced by homeless families in dealing with poverty, lack of affordable housing, mental health challenges, and violence. The finding is also notable in the context of assumptions of homogeneity of need among homeless and formerly homeless families. Our study findings indicate that even among an extremely high-risk formerly homeless population, there are resilient families (Coleman & Ganong, 2002). The nature of these cross-sectional, baseline data, do not enable us currently to examine patterns of resilience, but as this study progresses, the longitudinal data will enable us to examine resilience among these families over time.

An advantage to the present investigation was the use of multimethod data and the ability to control for intraclass correlation effects of children within families, and of families within different sites, as not all families may be randomly selected according to their individual needs. Parental mental health had a direct negative effect on child adjustment, consistent with earlier homeless study findings (e.g., Bassuk et al., 1997b; Buckner, Bassuk, Weinreb, & Brooks, 1999) and the extensive literature documenting the detrimental impact of parental mental illness on child adjustment (e.g., Beardslee, Bemporad, Keller, & Klerman, 1983; Beardslee et al., 1993).

A new finding for this population, although consistent with prior findings from the broader literature, was the demonstration of powerful direct effects of behavioral (i.e., observed) and cognitive parenting domains (i.e., self-efficacy) on child adjustment among families in supportive housing. Thus, parents who were rated as more positive, less coercive, and better at problem-solving on videotaped parent–child interaction tasks had children rated with more strengths and fewer emotional and behavioral symptoms. Parents' perceptions that their good parenting practices influenced positive child outcomes (i.e., parenting self-efficacy) also was significantly associated with better overall child adjustment. However, this direct effect of parenting self-efficacy on child adjustment was fully mediated by observed effective parenting practices, indicating parenting practices to be the most proximal predictor of child adjustment (e.g., Forgatch & DeGarmo, 1999).

Neither domain of parenting has been assessed previously in this population, although the mediation findings above resonate with prior findings in community samples indicating the association of parenting self-efficacy with parenting behaviors and child adjustment. For example, Coleman and Karraker (2003) found domain-specific parenting self-efficacy beliefs to be predictive of toddler developmental cognitive performance and positive child behavior outcomes (e.g., enthusiasm, compliance, affection toward mother). Similarly, parents of children with conduct problems demonstrated significantly lower parenting efficacy than a community comparison group, with parenting self-efficacy variables (global self-efficacy, maternal domain self-efficacy, and task-specific self-efficacy) accounting for a significant proportion of the variance in coercive parenting (Sanders & Woolley, 2005).

The capacity to feel effective in the parenting role is significant in the context of homelessness, given common experiences of disempowerment and perceptions of failure in this population (Banyard, 1995; Barrow & Laborde, 2008). The findings suggest

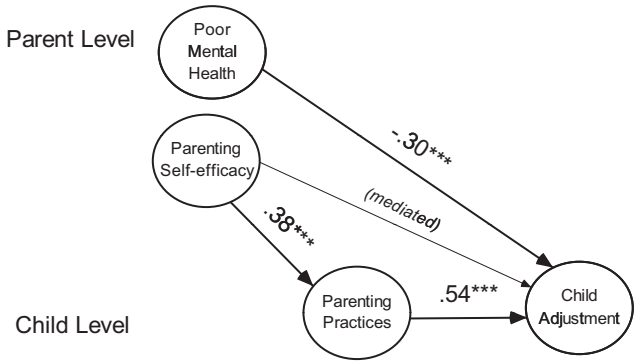

Figure 3. Summary of multilevel findings.

that attention to parenting self-efficacy might be an important element (and possible first step) in parenting interventions among homeless populations. Indeed, intervening with at risk mothers and infants, Olds' nurse home visitation program, designed to be an educational support program for parenting, was associated with increased parental mastery and sense of control (Olds & Korfmacher, 1998) and was indirectly associated with decreases in maltreatment and child injuries.

Surprisingly, the direct effect of parental mental health on child adjustment was not mediated by observed parenting practices, with no significant relationship found between mental health and observed parenting. This finding seemingly contradicts findings of earlier studies with different populations, such as affectively ill mothers, that suggested strong relationships between depression, negative parenting behaviors, and child maladjustment, in depressed versus nondepressed mothers (e.g., Beardslee et al., 1983, 1993). There are several possible explanations for this finding. At very high levels of parental distress, it is possible that the effects "spill over" directly to the child. McLoyd (1998), in her review of the effects of poverty on children's adjustment, reports that while parenting mediated the effects of moderate levels of poverty on children's adjustment, extreme poverty had a direct (nonmediated) negative effect on children's adjustment. Similarly, in a prior study of families exposed to a recent incident of domestic violence, we found no association of mothers' mental health to parenting practices, despite a main effect of parenting on child adjustment (Gewirtz, DeGarmo, & Medhanie, 2009). More research is needed to examine whether high-risk or crisis contexts (e.g., shelter, supportive housing, etc.) differ from low-risk contexts in the relationships among parenting and parental mental health. It would not be difficult to imagine how, in a high-risk context, a parent might want to consciously split off or separate her own distress from their parenting role—to provide better care for her children. Indeed, in her reports of interviews with homeless women, Banyard (1995) notes:

> "One single mother described it in this way: "Pretty much when I have problems that I can't do anything about at the Time I usually just focus on her [my daughter] and play with her or use her kind of that way to keep my attention off the other things. So that's pretty much what I did the other day. Showed her things, showed her the pictures and walked her around. She helps me a lot in that way. Having kids helps you in that way because they're a distraction". Other women reported that their children were a source of motivation and strength that helped them get from one day to the next. When the web of stress felt too overwhelming, thinking of their children pushed them to go on. When asked how she coped with the strain of being homeless one participant replied, "Just kids". If you have kids you don't worry about yourself. You have to get through it for them" (p. 882).

Longitudinal research with larger samples of families is needed to further examine the nature of relationships between parenting and parental mental health in homeless and formerly homeless families.

Implications for Policy and Practice

Although conclusions about cause obviously cannot be inferred from this cross-sectional study, these findings do offer several implications for practice and policy. First, they resonate with prior findings that families residing in supportive housing have children at significant risk for child adjustment difficulties. Together with evidence of other challenges faced by many caregivers in supportive housing (e.g., mental health problems, substance abuse difficulties, domestic violence) these findings confirm the need for social services in addition to housing subsidies for families who have experienced homelessness. Typically, services available to families in supportive housing are case management-focused. Case management is critical in providing access to appropriate benefits, opportunities, and care for families. However, our findings suggest that supportive housing also has the potential to provide an important portal for family based mental health prevention and treatment services. Specifically, our findings suggest that intervening both to improve parenting and to address adult mental health needs might be desirable and even necessary to support child adjustment in families living in supportive housing. While mental health treatment requires licensed professionals, an onsite resource that may be beyond the budget of many housing agencies, prevention programs to support child and family functioning require far fewer financial and human resources. Evidence-based prevention programs such as after-school programming, school monitoring and mentoring, and parent training may be implemented by well-trained and supervised paraprofessionals. Moreover, in single site supportive housing, the presence of multiple families provides economies of scale for prevention programming, as well as potential opportunities for colocation with outside mental health professionals. In particular, the increased stability that supportive housing provides over shelters suggests that these agencies might offer an important portal for the provision of evidence-based parenting and child prevention programs (Gewirtz & August, 2008), as well as for adult mental health services.

Limitations. The cross-sectional nature of these data precludes an understanding of the dynamic, interactive effects of parenting, parental mental health, and child adjustment. It might well be the case, for example, that baseline parenting affects not only concurrent child adjustment, but its developmental trajectory, consistent with a developmental psychopathology perspective (Cicchetti & Lynch, 1993; Sameroff, 1990). Prior studies have demonstrated the reciprocal influence of child adjustment on parental mental health, via changes in parenting. Thus, Forgatch and DeGarmo (2002) showed that improvements in child adjustment were mediated by improvements in parenting, which in turn mediated reductions in maternal psychopathology symptoms. We hope to capture some of these processes in subsequent data collection of this ongoing study.

Examining a population of families in supportive housing, without a low-income, housed comparison group precludes conclusions about the specific influence of the stressor of homelessness on the study outcomes. Therefore, we cannot conclude whether or not the direct and unmediated effect of parental mental health on child adjustment is unique to homelessness. Similarly, although they have previously struggled with long-term homelessness, families currently in supportive housing have arguably more stability than families in emergency shelters. Further, longitudinal, multigroup research should examine parenting, child adjustment, and parental mental health among homeless families in different living environments.

In this study, we were unable to discern whether service interventions influenced parenting and subsequently child adjustment, because there was no single yardstick by which to measure service interventions in these disparate sites [i.e., although all agencies

delivered services, the range and extent of services differed between sites (Hart-Shegos, 2006)]. However, as noted in the results section, while there were only modest associations among child adjustment indicators within sites, the strongest associations occurred in the observed problem-solving subscale of parenting. This could be interpreted to mean that some study sites were more facilitative than others in helping parents resolving issues, suggesting that in some sites, services may have contributed to supporting key parenting functions for residents. Further research is needed to determine the role that services may play in promoting effective parenting in supportive housing.

Although newer statistical methods provide great advantages for researchers studying hard-to-access populations with higher than usual rates of missing data, the difficulties of conducting studies with these populations must be acknowledged. Homeless families' experiences of adversity, discrimination, failures in maintaining housing, and sometimes the loss of children to foster placement, sometimes have resulted in a justified suspicion of researchers investigating the details of their lives. Developing strong partnerships with housing sites and their staff (Gewirtz, 2007) is critical to gathering further knowledge about this population.

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